



ATMOSPHERIC SCIENCE PROGRAM

ASP 2005 SCIENCE TEAM MEETING

Charleston, South Carolina

January 25-27, 2005

OVERVIEW

MONDAY, JANUARY 24 - 1700 - 1800 - ON SITE REGISTRATION

TUESDAY, JANUARY 25 - 0800 - 1730

Introduction and Overview by ASP Program Director

(Peter Lunn)

Scientific Vision by ASP Chief Scientist

(Steve Schwartz)

MODELING SESSION

(Chair- Steve Ghan)

FIELD STUDIES I

(Chair- Pete Daum)

FIELD STUDIES II

(Chair- Chris Doran)

1800 RECEPTION

(hosted by Brookhaven Science Associates)

WEDNESDAY, JANUARY 26 - 0800 - 1730

FIELD STUDIES III

(Chair- Lenny Newman)

INFRASTRUCTURE PROJECTS

(Chair- Rick Petty)

INSTRUMENT DEVELOPMENT AND LABORATORY MEASUREMENTS SESSION

(Chair- Jeff Gaffney)

FIELD STUDY OPPORTUNITIES

Charge to the working groups -

(Steve Schwartz)

Instrument Development and Laboratory Measurements Session

(Chair- Jeff Gaffney)

Modeling Session

(Chair- Steve Ghan)

Field Session

(Chair - Pete Daum)

THURSDAY, JANUARY 27 - 0800 - 1230

PARALLEL GROUP MEETINGS

GROUP REPORTS: Requirements and unmet measurement (and other) needs

Final Remarks:

(Steve Schwartz, Peter Lunn ...)

ADJOURN

TUESDAY - January 25, 2005

0730 - 0830 ON SITE REGISTRATION

0830 - 0915 Introduction and Overview by ASP Program Director
0915 - 1000 Scientific Vision by ASP Chief Scientist

(Peter Lunn)
(Steve Schwartz)

1000 - 1030 BREAK

1030 - 1201 MODELING SESSION

(Chair- Steve Ghan)

1030 - 1042 **Cynthia Atherton**, Lawrence Livermore National Laboratory: "Atmospheric Formation, Transformation, and Radiative Forcing of Acid-Catalyzed Secondary Organic Aerosols"
1043 - 1055 **Jerome Fast**, Pacific Northwest National Laboratory: "Synthesis of Field Observations and Multi-Scale Modeling of Aerosol Evolution and Its Impact on Radiative Forcing from Urban to Regional Scales"
1056 - 1108 **Steven Ghan**, Pacific Northwest National Laboratory: "Superparameterization of Aerosol Transport, Transformation, and Removal by Clouds"
1109 - 1121 **Rao Kotamarthi**, Argonne National Laboratory: "Process-Scale Modeling of ASP Field Measurements"
1122 - 1134 **Robert McGraw**, Brookhaven National Laboratory: "New Particle Formation: Mechanisms and Influence on Atmospheric Aerosol Properties"
1135 - 1147 **Mikhail Ovtchinnikov** and Dick Easter, Pacific Northwest National Laboratory: "Aerosol Processing by Clouds: Model Evaluation and Parameterization Development"
1148 - 1200 Stephen Schwartz and **Douglas Wright**, Brookhaven National Laboratory: "Modeling Aerosol Processes in the DOE Atmospheric Science Program"

1200 - 1330 LUNCH BREAK (*On your own*)

1330 - 1514 FIELD STUDIES I

(Chair- Pete Daum)

1330 - 1342 **Patrick Arnott**, Desert Research Institute, and Patrick Sheridan, NOAA CMDL: "Aerosol Light Absorption and Climate: Quantification by the Photoacoustic Method"
1343 - 1355 **Carl Berkowitz** and Larry Berg, Pacific Northwest National Laboratory: "The Effects of Cloud Processes on the optical Properties of Aerosols"
1356 - 1408 **Peter Daum**, Brookhaven National Laboratory: "Aerosol Cloud Interactions: Field Studies and Interpretation"
1409 - 1421 Christopher Doran and **Jim Barnard**, Pacific Northwest National Laboratory: "Field Studies of the Evolution of Aerosols Downwind of an Urban Area: The Roles of Black Carbon and Meteorological Processes on Aerosol Radiative Effects"
1422 - 1434 **Jeffrey Gaffney**, Argonne National Laboratory: "Determining Aerosol Mean Residence Times and Black Carbon Washout Rates with Natural Radionuclides and Isotopic Signatures"
1435 - 1447 **Mary Gilles**, Lawrence Berkeley National Laboratory: "Soft X-ray Spectromicroscopy of Black Carbon Aerosols"
1448 - 1500 **Lee Harrison**, SUNY-Albany: "Determination of Aerosol Indirect Effects on Cloud Droplet Radii from Ground-Based Remote Sensing"
1501 - 1513 **Chris Hostetler**, NASA Langley: "Characterizing Aerosol Distributions and Optical Properties using Airborne Active and Passive Remote Sensing"

1514 - 1545 BREAK

1545 - 1729 FIELD STUDIES II

(Chair- Chris Doran)

1545 - 1557 **James Hudson**, Desert Research Institute, "CCN Spectral Measurements"
1558 - 1610 **Lawrence Kleinman**, Brookhaven National Laboratory: "Field Studies on the Life Cycle of Aerosols and Their Direct Radiative Impacts"

- 1611 - 1623 **Yin-Nan Lee**, Brookhaven National Laboratory: "Characterization of Aerosol Organic Matter: Detection, Formation and Optical and Radiative Effects"
- 1624 - 1636 **Sasha Madronich**, NCAR: "Impacts of Secondary Organics on the Evolution of Climate-Relevant Aerosol Properties During Lagrangian Aerosol Plume Experiments"
- 1637 - 1649 **Nancy Marley**, Argonne National Laboratory: "Aerosol Precursors and Aerosol Instrumentation: Field Measurements and Method Development"
- 1650 - 1702 **Peter McMurry**, University of Minnesota: "Nucleation and Growth of Atmospheric Aerosols"
- 1703 - 1715 **Mario Molina**, MIT, Charles Kolb, Aerodyne, and Jose Jimenez, University of Colorado: "Characterization of Fine Particulate Matter (PM) and Secondary PM Precursor Gases in the Mexico City Metropolitan Area"
- 1716 - 1728 **John Ogren**, NOAA CMDL: "Cloud-Driven Changes in Aerosol Optical Properties"
- 1800 RECEPTION** (hosted by **BROOKHAVEN SCIENCE ASSOCIATES**)

WEDNESDAY - January 26, 2005

0830 - 0922 FIELD STUDIES III (Chair- Lenny Newman)

- 0830 - 0842 **Suzanne Paulson**, UCLA: "Black Carbon and Organic Carbon Aerosol Mass and Optical Properties: Comparability and Causes of Uncertainties"
- 0843 - 0855 **John Seinfeld**, California Institute of Technology: "Mechanisms of Formation of Secondary Organic Aerosols and Implications for Global Radiative Forcing"
- 0856 - 0908 **Jian Wang**, Brookhaven National Laboratory: "Fast Measurements of Aerosol Size Distribution, Hygroscopicity, and Volatility for Aircraft Deployment"
- 0909 - 0921 **Judith Weinstein-Lloyd**, SUNY-Old Westbury: "Secondary Aerosol: Precursors and Formation Mechanisms"

0922 - 1014 INFRASTRUCTURE PROJECTS (Chair- Rick Petty)

- 0922 - 0934 **Richard Coulter**, Argonne National Laboratory: "Instrumentation and Deployment in Support of ASP Field Studies"
- 0935 - 0947 **John Hubbe**, Pacific Northwest National Laboratory: "Research Aircraft Operations"
- 0948 - 1000 **William Shaw**, Pacific Northwest National Laboratory: "Meteorology and Aerosol Measurements for DOE's Atmospheric Science Program"
- 1001 - 1013 **Stephen Springston**, Brookhaven National Laboratory: "Chemistry and Microphysics of the Troposphere: Core Measurements for Field Programs"

1015 - 1045 BREAK

1045 - 1203 INSTRUMENT DEVELOPMENT AND LABORATORY MEASUREMENTS SESSION (Chair- Jeff Gaffney)

- 1045 - 1057 **Michael Alexander**, Pacific Northwest National Laboratory: "Proton Transfer Reaction Ion Trap Mass Spectrometer (PTR-ITMS): Next Generation Aircraft Instrumentation for Gas Phase Organic Analysis"
- 1058 - 1110 **Arthur Sedlacek**, Brookhaven National Laboratory: "Measurement of Aerosol Absorption Using Photothermal Interferometry"
- 1111 - 1123 **Paul Davidovits**, Boston College: "Effects of Soot Morphology and Chemistry on Particle Hygroscopic and Optical Properties"

- 1124 - 1136 **Barbara Finlayson-Pitts**, UC-Irvine: "Impacts on Properties of Nitrate Aerosols Due to Exposure to Irradiated VOC-NO_x Mixtures"
- 1137 - 1149 **Alexander Laskin**, Pacific Northwest National Laboratory: "Laboratory Studies of Optical and Hygroscopic Properties of Field Collected Atmospheric Aerosols"
- 1150 - 1202 **Paul Ziemann**, Roger Atkinson, and Janet Arey, UC-Riverside: "Laboratory Studies of Processing of Carbonaceous Aerosols by Atmospheric Oxidants"

1203 - 1330 LUNCH BREAK (*On your own*)

1330 - 1430 FIELD STUDY OPPORTUNITIES

(Chair - **Chris Doran**)

- 1330 - 1345 Marine Stratus California 2005 - (**Pete Daum**)
- 1345 - 1400 Mexico City 2006 - (**Jeff Gaffney**)
- 1400 - 1415 Houston 2006 - (Larry Kleinman)
- 1415 - 1430 Aerosol Outflow from Cumuliform Clouds - (**Carl Berkowitz**)
- 1430 - 1440 Charge to the working groups -
- 1440 - 1510 Instrument Development and Laboratory Measurements Session

(**Steve Schwartz**)
(Chair- **Jeff Gaffney**)

1510 - 1530 BREAK

1530 - 1615 Modeling Session

(Chair- **Steve Ghan**)

1615 - 1730 Field Session

(Chair- **Pete Daum**)

THURSDAY - January 27, 2005

0830 - 1000 PARALLEL GROUP MEETINGS

1000 - 1030 BREAK

1030 - 1215 GROUP REPORTS: Requirements and unmet measurement (and other) needs

1030 - 1050 Group report and discussion: Lab and Instrumentation

1050 - 1120 Group report and discussion: Modeling

1120 - 1215 Group report and discussion: Field

1215 - 1230 Final Remarks:

(**Steve Schwartz, Peter Lunn ...**)

1230 ADJOURN

RECEPTION

(hosted by Brookhaven Science Associates)

Tuesday, January 25, 2005

18:00

